In the Claims

Please amend Claims 2, 17, 18, 36, 46, 66, 86 to 89, 92, 93, 96, and 104 as follows:

- 2. (Amended) A compound as claimed in claim 1, wherein X is -O-, -S-, or -NH-.
- 17. (Amended) A compound as claimed in claim 1, which is 1-[4-[4-[4-(6-fluoro-1H-indazol-3-yl)-1-piperazinyl]butoxy]-3-methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.
- 18. (Amended) A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-chloro-1H-indazol-3-yl)-1-piperazinyl]propoxy]-3-methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.
- 36. (Amended) An [antispsychotic] <u>antipsychotic</u> composition, which comprises a compound as claimed in claim 1, 25,26, 27, 28, or 29, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

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46. (Amended Four times) A compound of the formula

wherein

X is
$$-O-$$
, $-S-$, $-NH-$, or $-N(R_2)$;

 R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

(R_1) is

 $-CH_2-CH=CH-CH_2-$

 $\underline{-CH_2}\underline{-C}\underline{=C}\underline{-CH_2}\underline{-}$

 $-CH_2-CH=CH-CH_2-CH_2-$

 $-CH_2-CH_2-CH=CH-CH_2-$

 $-CH_2-C\equiv C-CH_2-CH_2-$, or

 $-CH_2-CH_2-C\equiv C-CH_2-$

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl,

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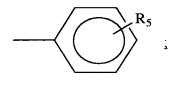
aminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl,

 $-C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, -CH(OR_7)-alkyl,$

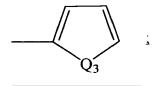
-C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

where alkyl is lower alkyl;

aryl is phenyl or



wherein R₅ is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine,
fluorine, bromine, iodine, lower monoalkylamino, lower
dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;
heteroaryl is



where Q₃ is -O-, -S-, -NH-, or -CH=N-;

W is CH₂ or CHR₈ or N-R₉;

R₇ is hydrogen, lower alkyl, or lower alkyl–(C=O)-;

R₈ is lower alkyl;

R₉ is hydroxy, alkoxy, or -NHR₁₀; and

 R_{10} is hydrogen, lower alkyl, C_1 – C_3 acyl, aryl, –C(=O)–aryl, or –C(=O)–heteroaryl,

wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C₁-C₄ alkyl, chlorine, fluorine, bromine, iodine, cyano, C₁-C₄ alkoxy, or -COOR₂₃ wherein R₂₃ is H or C₁-C₄ alkyl;

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all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof.

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66. (Amended four times) A compound of the formula

wherein

X is
$$-O_{-}$$
, $-S_{-}$, $-NH_{-}$, or $-N(R_2)$;

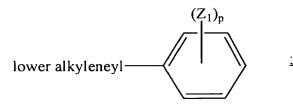
 R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, $(C_3 - C_{10})$ cycloalkyl, aroyl, $(C_2 - C_{11})$ alkanoyl, and phenylsulfonyl groups; aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

 (R_1) is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1 – C_6 linear alkyl group, phenyl group or



wherein Z₁ is lower alkyl, -OH, lower alkoxy, -CF₃, -NO₂, -NH₂ or halogen, p as previously defined;

 R_{20} is $-(CH_2)_n$, where n is 2, 3, 4 or 5;

 R_{21} is

$$-CH_2-CH=CH-CH_2-$$

$$-CH_2-C\equiv C-CH_2-$$

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$$-CH_2-CH=CH-CH_2-CH_2-$$

$$-CH_2-CH_2-CH=CH-CH_2-$$

$$-CH_2-C\equiv C-CH_2-CH_2-$$
, or

$$-CH_2-CH_2-C\equiv C-CH_2-$$

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine,

fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro,

lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl,

trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl,

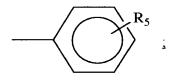
dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl,

-C(=O)-aryl, -C(=O)-heteroaryl, $-CH(OR_7)$ -alkyl, -C(=W)-alkyl,

-C(=W)-aryl, or -C(=W)-heteroaryl;

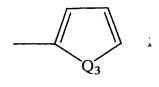
wherein alkyl is lower alkyl;

aryl is phenyl or



where R₅ is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



wherein Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH₂ or CHR₈ or N-R₉;

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R₇ is hydrogen, lower alkyl, or lower alkyl-(C=O)-;

R₈ is lower alkyl;

R₉ is hydroxy, alkoxy, or -NHR₁₀; and

R₁₀ is hydrogen, lower alkyl, C₁-C₃ acyl, aryl,

-C(=O)-aryl, or -C(=O)-heteroaryl,

wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is

hydrogen, C₁-C₄ alkyl, chlorine, fluorine, bromine, iodine, cyano, C₁-C₄

alkoxy, or -COOR₂₃

wherein R₂₃ is H or C₁-C₄ alkyl;

with the exclusion of compounds wherein X is -S-, R₁ is R₂₀, R is H, and m=1; all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof.

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86. (Amended four times) A pharmaceutical composition, which comprises a compound of the formula

wherein

$$X \text{ is } -O_{-}, -S_{-}, -NH_{-}, \text{ or } -N(R_{2});$$

 R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

 (R_1) is

 $\underline{-CH_2}\underline{-CH}\underline{-CH}\underline{-CH_2}\underline{-}$

 $\underline{-CH_2}\underline{-C}\equiv C\underline{-CH_2}\underline{-}$

 $-CH_2-CH=CH-CH_2-CH_2-$

 $-CH_2-CH_2-CH=CH-CH_2-$

 $\underline{-CH_2}$ $\underline{-C}$ $\underline{=}$ \underline{C} $\underline{-CH_2}$ $\underline{-CH_2}$ $\underline{-}$, or

 $\underline{-CH_2-CH_2-C}\equiv C-\underline{CH_2-},$

the -CH=CH- bond being cis or trans;

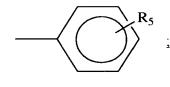
R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio,

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trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-alkyl, -C(=O)-heteroaryl, -CH(OR₇)-alkyl,

-C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl; wherein alkyl is lower alkyl;

aryl is phenyl or



wherein R₅ is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is

$$Q_3$$

wherein Q₃ is -O-, -S-, -NH-, or -CH=N-;

W is CH₂ or CHR₈ or N-R₉;

R₇ is hydrogen, lower alkyl, or lower alkyl-(C=O)-;

R₈ is lower alkyl;

R₉ is hydroxy, alkoxy, or -NHR₁₀; and

R₁₀ is hydrogen, lower alkyl, C₁-C₃ acyl, aryl,

-C(=O)-aryl, or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C₁-C₄ alkyl, chlorine, fluorine, bromine, iodine, cyano, C₁-C₄

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alkoxy, or -COOR₂₃, wherein R₂₃ is H or C₁-C₄ alkyl;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, and a pharmaceutically acceptable carrier therefor.

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87. (Amended four times) A pharmaceutical composition, which comprises a compound of the formula

$$(Y)_{p} = \begin{array}{c} (R)_{m} \\ N = (R_{1}) = 0 \end{array}$$

wherein

 $X \text{ is } -O_{-}, -S_{-}, -NH_{-}, \text{ or } -N(R_{2});$

 R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

 (R_1) is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1 – C_6 linear alkyl group, phenyl group or

lower alkyleneyl
$$(Z_1)_p$$

wherein Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen, and p as previously defined;

 R_{20} is $-(CH_2)_n$, where n is 2, 3, 4 or 5;

 R_{21} is

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 $-CH_2-CH=CH-CH_2-$

 $-CH_2-C\equiv C-CH_2=$

 $-CH_2-CH=CH-CH_2-CH_2-$

 $-CH_2-CH_2-CH=CH-CH_2-$

 $-CH_2-C\equiv C-CH_2-CH_2-$, or

 $-CH_2-CH_2-C\equiv C-CH_2-$

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,

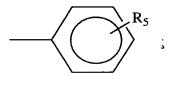
-C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl,

-C(=O)-heteroaryl,-CH(OR₇)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or

_C(=W)-heteroaryl;

wherein alkyl is lower alkyl;

aryl is phenyl or



wherein R₅ is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy; heteroaryl is

$$Q_3$$

wherein Q₃ is -O-, -S-, -NH-, or -CH=N-;

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W is CH₂ or CHR₈ or N-R₉;

R₇ is hydrogen, lower alkyl, or lower alkyl-(C=O)-;

R₈ is lower alkyl;

R₉ is hydroxy, alkoxy, or -NHR₁₀; and

R₁₀ is hydrogen, lower alkyl, C₁–C₃ acyl, aryl,

-C(=O)-aryl, or -C(=O)-heteroaryl,

wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is

hydrogen, C₁-C₄ alkyl, chlorine, fluorine, bromine, iodine, cyano, C₁-C₄

alkoxy, or -COOR₂₃ wherein R₂₃ is H or C₁-C₄ alkyl;

with the exclusion of compounds wherein X is -S-, R₁ is R₂₀, R is H, and m=1; all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, and a pharmaceutically acceptable carrier therefor.

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88. (Amended four times) An antipsychotic composition, which comprises a compound of the formula

wherein

X is
$$-O_{-}$$
, $-S_{-}$, $-NH_{-}$, or $-N(R_2)$;

 R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

(R_1) is

 $-CH_2-CH=CH-CH_2-$

 $-CH_2-C\equiv C-CH_2-$

 $-CH_2$ - $CH=CH-CH_2$ - CH_2 -,

 $-CH_2-CH_2-CH=CH-CH_2-$

 $\underline{-CH_2}$ $\underline{-C}$ $\underline{=C-CH_2}$ $\underline{-CH_2}$ $\underline{-, or}$

 $\underline{-CH_2}\underline{-CH_2}\underline{-C}\equiv C\underline{-CH_2}\underline{-},$

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio,

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trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl,

aminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl,

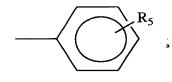
-C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl,

 $-CH(OR_7)$ -alkyl, -C(=W)-alkyl, -C(=W)-aryl, or

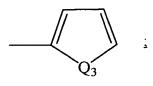
-C(=W)-heteroaryl;

wherein alkyl is lower alkyl;

aryl is phenyl or



wherein R₅ is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine,
fluorine, bromine, iodine, lower monoalkylamino, lower
dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;
heteroaryl is



wherein Q₃ is -O-, -S-, -NH-, or -CH=N-;

W is CH₂ or CHR₈ or N-R₉;

R₇ is hydrogen, lower alkyl, or lower alkyl-(C=O)-;

 R_8 is lower alkyl;

R₉ is hydroxy, alkoxy, or -NHR₁₀; and

 $\underline{R_{10}}$ is hydrogen, lower alkyl, $\underline{C_1}$ – $\underline{C_3}$ acyl, aryl, $\underline{-C(=O)}$ –aryl, or $\underline{-C(=O)}$ –heteroaryl,

wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is

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hydrogen, C₁–C₄ alkyl, chlorine, fluorine, bromine, iodine, cyano, C₁–C₄ alkoxy, or –COOR₂₃ where R₂₃ is H or C₁–C₄ alkyl;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

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89. (Amended four times) An antipsychotic composition, which comprises a compound of the formula

$$(Y)_{p} = \begin{array}{c} (R)_{m} \\ N - (R_{1}) - O \end{array}$$

wherein

 R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and phenylsulfonyl groups; aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

 (R_1) is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1 – C_6 linear alkyl group, phenyl group or

lower alkyleneyl
$$Z_1$$

wherein Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen; and p is as previously defined;

 R_{20} is $-(CH_2)_n$ -, where n is 2, 3, 4 or 5;

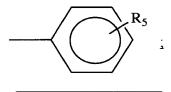
 R_{21} is

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$$\begin{array}{l} -\text{CH}_2\text{-CH}=\text{CH}-\text{CH}_2\text{-},\\ -\text{CH}_2\text{-C}\equiv\text{C}-\text{CH}_2\text{-},\\ -\text{CH}_2\text{-CH}=\text{CH}-\text{CH}_2\text{-}\text{CH}_2\text{-},\\ -\text{CH}_2\text{-CH}_2\text{-CH}=\text{CH}-\text{CH}_2\text{-},\\ -\text{CH}_2\text{-C}\equiv\text{C}-\text{CH}_2\text{-CH}_2\text{-}, \text{ or}\\ -\text{CH}_2\text{-CH}_2\text{-C}\equiv\text{C}-\text{CH}_2\text{-},\\ \end{array}$$

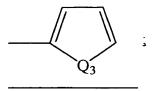
the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, -CH(OR₇)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl; wherein alkyl is lower alkyl; aryl is phenyl or



wherein R₅ is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



wherein Q_3 is $-O_-$, $-S_-$, $-NH_-$, or $-CH=N_-$; W is CH_2 or CHR_8 or $N-R_9$;

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R₇ is hydrogen, lower alkyl, or lower alkyl-C=O)-;

R₈ is lower alkyl;

R₉ is hydroxy, alkoxy, or -NHR₁₀; and

R₁₀ is hydrogen, lower alkyl, C₁–C₃ acyl, aryl,

-C(=O)-aryl, or -C(=O)-heteroaryl,

wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is

hydrogen, C₁-C₄ alkyl, chlorine, fluorine, bromine, iodine, cyano, C₁-C₄

alkoxy, or -COOR₂₃ wherein R₂₃ is H or C₁-C₄ alkyl;

with the exclusion of compounds wherein X is -S-, R₁ is R₂₀, R is H, and m=1; all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

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92. (Amended four times) An analgesic composition, which comprises a compound of the formula

wherein

$$X \text{ is } -O-, -S-, -NH-, \text{ or } -N(R_2);$$

 R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and phenylsulfonyl groups; aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

 (R_1) is

 $-CH_2-CH=CH-CH_2-$

 $-CH_2-C\equiv C-CH_2-$

-CH₂-CH=CH-CH₂-CH₂-,

 $-CH_2-CH_2-CH=CH-CH_2-$

 $\underline{-CH_2-C} = \underline{C-CH_2-CH_2} -$, or

 $-CH_2-CH_2-C\equiv C-CH_2-$

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl,

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aminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl,

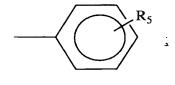
-C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl,

 $-CH(OR_7)$ -alkyl, -C(=W)-alkyl, -C(=W)-aryl, or

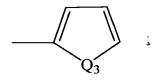
-C(=W)-heteroaryl;

wherein alkyl is lower alkyl;

aryl is phenyl or



wherein R₅ is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy; heteroaryl is



wherein Q₃ is -O-, -S-, -NH-, or -CH=N-;

W is CH₂ or CHR₈ or N-R₉;

R₇ is hydrogen, lower alkyl, or lower alkyl-(C=O)-;

R₈ is lower alkyl;

R₉ is hydroxy, lower alkoxy, or -NHR₁₀; and

R₁₀ is hydrogen, lower alkyl, C₁-C₃ acyl, aryl,

-C(=O)-aryl, or -C(=O)-heteroaryl,

wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C₁-C₄ alkyl, chlorine, fluorine, bromine, iodine, cyano, C₁-C₄

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alkoxy, or -COOR₂₃ wherein R₂₃ is H or C₁-C₄ alkyl;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

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93. (Amended four times) An analgesic composition, which comprises a compound of the formula

wherein

X is $-O_{-}$, $-S_{-}$, $-NH_{-}$, or $-N(R_2)$;

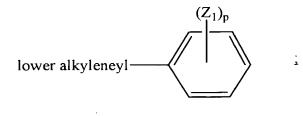
 $\underline{R_2}$ is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, $(\underline{C_3}-\underline{C_{10}})$ cycloalkyl, aroyl, $(\underline{C_2}-\underline{C_{11}})$ alkanoyl, and phenylsulfonyl groups; aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

 (R_1) is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1 – C_6 linear alkyl group, phenyl group or



wherein Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen; and p is as previously defined;

 R_{20} is $-(CH_2)_n$, where n is 2, 3, 4 or 5;

 R_{21} is

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$$-CH_2-CH=CH-CH_2-$$

 $-CH_2-C\equiv C-CH_2-$

-CH₂-CH=CH-CH₂-CH₂-,

 $-CH_2-CH_2-CH=CH-CH_2-$

 $-CH_2-C\equiv C-CH_2-CH_2-$, or

 $-CH_2-CH_2-C\equiv C-CH_2-$

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,

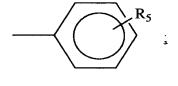
-C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl,

-C(=O)-heteroaryl, $-CH(OR_{\underline{7}})$ -alkyl, -C(=W)-alkyl, -C(=W)-aryl, or

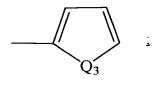
-C(=W)-heteroaryl;

wherein alkyl is lower alkyl;

aryl is phenyl or



wherein R₅ is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine,
fluorine, bromine, iodine, lower monoalkylamino, lower
dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;
heteroaryl is



wherein Q₃ is -O-, -S-, -NH-, or -CH=N-;

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W is CH₂ or CHR₈ or N-R₉;

R₇ is hydrogen, lower alkyl, or lower alkyl–(C=O)–;

R₈ is lower alkyl;

R₉ is hydroxy, lower alkoxy, or -NHR₁₀; and

R₁₀ is hydrogen, lower alkyl, C₁-C₃ acyl, aryl,

-C(=O)-aryl, or -C(=O)-heteroaryl,

wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is

hydrogen, C₁-C₄ alkyl, chlorine, fluorine, bromine, iodine, cyano, C₁-C₄

alkoxy, or -COOR₂₃ wherein R₂₃ is H or C₁-C₄ alkyl;

with the exclusion of compounds wherein X is -S-, R₁ is R₂₀, R is H, and m=1; all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

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96. (Amended three times) An analgesic composition, which comprises a compound of the formula

wherein

 $X \text{ is } -O_{-}, -S_{-}, -NH_{-}, \text{ or } -N(R_2);$

 $\underline{R_2}$ is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, $(\underline{C_3}-\underline{C_{10}})$ cycloalkyl, aroyl, $(\underline{C_2}-\underline{C_{11}})$ alkanoyl, and phenylsulfonyl groups; aryl is as defined hereinafter;

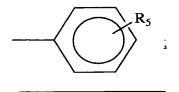
p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

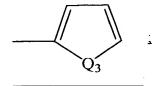
Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-; n is 2, 3, 4 or 5;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, -CH(OR₇)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl; wherein alkyl is lower alkyl; aryl is phenyl or

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wherein R₅ is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine,
fluorine, bromine, iodine, lower monoalkylamino, lower
dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;
heteroaryl is



 Q_3 is -O, -S, -NH, or -CH=N-;

W is CH₂ or CHR₈ or N-R₉;

R₇ is hydrogen, lower alkyl, or lower alkyl–(C=O)–;

R₈ is lower alkyl;

R₉ is hydroxy, lower alkoxy, or -NHR₁₀; and

R₁₀ is hydrogen, lower alkyl, C₁-C₃ acyl, aryl,

-C(=O)-aryl, or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the proviso that at least one R is selected from the group consisting of dialkylaminocarbonyl, formyl, -C(=W)-aryl, and -C(=W)-heteroaryl; with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C₁-C₄ alkyl, chlorine, fluorine, bromine, iodine, cyano, C₁-C₄ alkoxy, or -COOR₂₃ wherein R₂₃ is H or C₁-C₄ alkyl;

with the exclusion of compounds wherein X is -S-, R₁ is R₂₀, R is H, and m=1; all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce a pain-relieving effect, Synnestvedt & Lechner Llp

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and a pharmaceutically acceptable carrier therefor.

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104. (Amended three times) A compound as claimed in claim 96, wherein X is -O-, -S-, or -NH-; Y is H, Cl, F, or -CF₃; R is selected from the group consisting of hydrogen, C₁-C₃ alkyl, C₁-C₃ alkoxy, -OH, Cl, F, Br, I, C₁-C₃ monoalkylamino, acylamino, -NO₂, -OCF₃, and -CF₃; and n is 2, 3, or 4.